

REMARKS

I. Introduction

The undersigned thanks Examiner Swiger for his review and consideration of the present Application, including for his time spent discussing the application during April 6, 2009 and May 5, 2009 telephone interviews.¹ In response to the Non-Final Office Action mailed March 10, 2009, the undersigned submits the following amendment and remarks.

Upon entry of the amendment, claims 1, 3-5, 8-10, 12, and 25-40 are pending in the application. The present amendment amends claims 1, 4, 9, 25-30, 32-37, and 39. Claims 2, 6-7, 11, and 13-24 remain cancelled. No new matter has been added by the present amendment. Support for the present amendments can be found, among other places, in Figures 1 and 4-7, and at paragraphs 41-43 of the specification.

The present amendment and response is believed to overcome all of the prior Office Action rejections, and allowance of the pending claims is kindly requested.

II. Objection to Claim 4

The Office Action objects to claim 4 as depending from a canceled claim. The present Amendment amends claim 4 so that it depends from pending claim 1. Thus, this rejection is moot and its withdrawal is respectfully requested.

III. Objection to the Specification

The Office Action objects to the specification as failing to provide proper antecedent basis for the claim term "peripheral edge." The undersigned respectfully traverses this

¹ Interview Summary: During the April 6, 2009 and May 5, 2009 telephonic interviews, representatives of applicants, the undersigned, and the Examiner discussed the cited reference and proposed claim amendments.

objection because, as discussed during the April 6, 2009 telephone interview, Figure 5, as one example, illustrates the peripheral edge of the first portion. Because the figures provide support for the claim term “peripheral edge,” the undersigned respectfully requests that this objection be withdrawn.

The Office Action also states that the Amendment filed on November 21, 2008 introduced new matter because “applicant has not provided a description that the first portion of the generally dome-shaped exterior surface of the hollow body occupies substantially less than half of the hollow body exterior surface.” Office Action, pp. 2-3. The undersigned respectfully traverses this objection and notes that paragraph 47 explains that the cutting teeth are “located in a portion, portions, sector, or sectors of the surface which occupy substantially less than one half of the surface area of the surface.” Para. 47. In other words, the cutting teeth are confined to an area of the surface that occupies substantially less than one half of the surface area. Because the Amendment filed on November 21, 2008 is fully supported by the specification, the undersigned respectfully requests that this objection be withdrawn.

IV. Claim Rejections – 35 U.S.C. § 112

The Office Action rejects claims 10 and 31 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, on page 3 of the Office Action, the Examiner states that “Applicant has not described how the first portion itself occupies substantially less than half of the hollow body exterior surface. Applicant has defined only that the teeth occupy substantially less than one half of the surface area.” Office Action, p. 3. The undersigned respectfully traverses this rejection, as paragraph 47 of

the specification explains that the cutting teeth are “located in a portion, portions, sector, or sectors of the surface which occupy substantially less than one half of the surface area of the surface.” Para. 47. Thus, the portion in which the cutting teeth are located, and not the cutting teeth themselves, occupies substantially less than one half of the surface area. Accordingly, the undersigned respectfully requests that this rejection be withdrawn.

The Office Action further rejects claims 1, 3-5, 8, 25-26, 27-28, 35, and 37-38 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, page 3 of the Office Action contends that “Applicant has not defined what is meant by a peripheral edge forming at least a portion of a first arc.” Office Action, p. 3. The undersigned respectfully traverses this rejection. Moreover, this limitation has been cancelled from claims 25-28 and 37-38, and thus the rejection of these claims is moot and its withdrawal is respectfully requested.

The undersigned submits that one of ordinary skill in the art would understand what is meant by a peripheral edge forming at least a portion of a first arc, as shown, for example, in Figure 5, and as discussed with the Examiner during the April 6, 2009 telephone interview. Accordingly, withdrawal of this rejection is respectfully requested.

V. Claim Rejections – 35 U.S.C. § 102

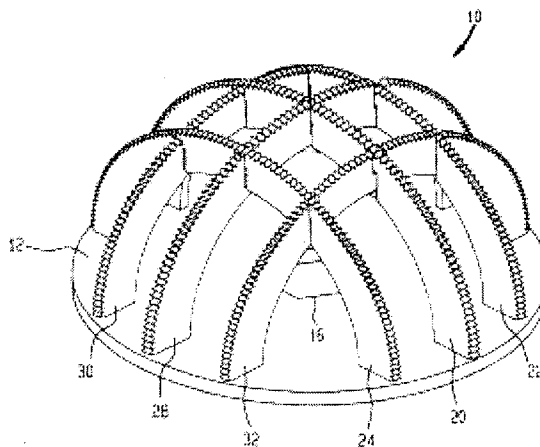
The Office Action rejects claims 1, 3-5, 8-10, 12, and 25-39 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,775,719 to *Frieze et al.* (“*Frieze*”). As an initial matter, the undersigned notes that pending claim 40 was not acknowledged as pending in this application or otherwise addressed in the Office Action. The undersigned respectfully

submits that pending claim 40 was properly added by the Amendment filed on November 21, 2008 and respectfully requests examination thereof.

A. *Frieze*

Frieze discloses an acetabular reamer having a first set of semi-circular cutter blades and a second set of semi-circular cutter blades that cross and intersect with the first set of cutter blades at right angles. As shown in Figure 2 of the patent reproduced below, the arrangement of the first set of cutter blades (20, 22, and 24) and the second set of cutter blades (28, 30, and 32) of the reamer of *Frieze* results in a plurality of open spaces between the cutter blades, through which bone chips can escape.

FIG. 1



Among other things, the reamer disclosed in *Frieze* is not well suited for minimally invasive surgery due to the distribution of cutting teeth generally across the entire exterior of the structure.

B. *Frieze Does Not Anticipate Pending Claims 1, 3-5, 8-10, 12, and 25-40.*

For a reference to anticipate a claim under § 102, it must describe, either expressly or inherently, each and every element set forth in the claim. MPEP § 2131. *Frieze* does not disclose, either expressly or inherently, each and every element set forth in the pending claims.

Amended independent claims 1 and 35 define a reamer comprising an exterior surface and a rim, the exterior surface including a first portion and at least one second portion, the first portion dimensioned substantially as a surface of rotation about a rotational axis and comprising a plurality of raised edges for cutting the bone or the cartilage and a plurality of openings, where the at least one second portion forms at least one generally planar exterior surface and where the raised edges are confined to the first portion of the exterior surface. Moreover, the first portion of the exterior surface includes a peripheral edge that forms at least a portion of a first arc, wherein an intersection of the first portion and the at least one second portion forms a second arc that extends continuously from one point on the peripheral edge of the first portion to another point on the peripheral edge of the first portion. In addition, the at least one second portion extends substantially close to the rim to capture fragments of the bone or cartilage into the interior of the reamer.

Among other things, *Frieze* does not disclose expressly or inherently a reamer having a first portion and at least one second portion, where (1) the at least one second portion forms

at least one generally planar exterior surface, (2) the first portion has a peripheral edge that forms at least a portion of a first arc, and where an intersection of the first portion and the at least one second portion forms a second arc that extends continuously from one point on the peripheral edge of the first portion to another point on the peripheral edge of the first portion, and (3) the at least one second portion extends substantially close to the rim so as to capture fragments of the bone or cartilage into the interior of the reamer.

As discussed with the Examiner during two telephone interviews, among other things, *Frieze* does not disclose or suggest a reamer having a second portion that extends substantially close to a rim of the reamer so as to capture fragments of bone into the interior of the reamer.

Pending claims 3-5 and 8 depend from claim 1 and claim 26 depends from claim 25. Thus, claims 3-5, 8, and 26 are patentable for the reasons independent claims 1 and 25 are patentable, and may be patentable for additional reasons.

Amended independent claims 9, 29, 32, and 36 define a reamer having an exterior surface that includes a first portion and at least one second portion, where the first portion comprises a plurality of raised edges and a plurality of openings, where the raised edges comprise a lip configured to capture fragments of bone or cartilage or the combination thereof and direct those fragments through the openings into the interior of the reamer. Moreover, independent claims 9, 29, 32, and 36 require that the raised edges be confined to an area of the first portion in a band straddling a middle portion of the reamer, and that the at least one second portion form a portion of the exterior surface.

Frieze does not disclose a reamer having a first portion comprising a plurality of raised edges and at least one second portion, where (1) the raised edges comprise a lip configured to capture fragments of bone or cartilage or the combination thereof and direct those fragments through the openings into the interior of the reamer, (2) the at least one second portion forms a portion of the exterior surface, and (3) the raised edges are confined to the first portion in a band straddling a middle portion of the reamer. Instead, *Frieze* discloses a reamer having raised edges that are distributed throughout the entire surface of the reamer, and are not confined to a band straddling the middle portion. In addition, *Frieze* does not disclose a reamer having raised edges that comprise a lip configured to capture fragments of bone or cartilage or the combination thereof and direct those fragments through the openings into the interior of the reamer. Moreover, *Frieze* does not disclose a second portion that forms a portion of the exterior surface. Thus, *Frieze* does not anticipate independent claims 9, 29, 32, and 36.

Claims 10 and 12 depend from claim 9. Claims 30 and 31 depend from claim 29, and claims 33 and 34 depend from claim 32. Thus, dependent claims 10, 12, 30-31, and 33-34 are patentable for the reasons independent claims 9, 29, and 32 are patentable, and may be patentable for additional reasons.

Amended independent claims 25 and 27 define a reamer comprising an exterior surface, the exterior surface including a first portion and at least one second portion, the first portion dimensioned substantially as a surface of rotation about a rotational axis and comprising a plurality of raised edges for cutting the bone or the cartilage and a plurality of openings, and where the at least one second portion forms at least one generally planar

exterior surface and where the raised edges are confined to the first portion. Moreover, the raised edges of the first portion comprise a lip configured to capture fragments of bone or cartilage or the combination thereof and direct those fragments through the openings into the interior of the reamer.

Among other things, *Frieze* does not disclose expressly or inherently a reamer having a first portion comprising a plurality of raised edges and at least one second portion, where (1) the at least one second portion forms at least one generally planar exterior surface, (2) the raised edges are confined to the first portion, and (3) the raised edges comprise a lip configured to capture fragments of bone or cartilage or the combination thereof and direct those fragments through the openings into the interior of the reamer. Instead, *Frieze* discloses a reamer having raised edges that are distributed throughout the entire surface of the reamer. In addition, *Frieze* does not disclose a reamer having raised edges that comprise a lip configured to capture fragments of bone or cartilage or the combination thereof and direct those fragments through the openings into the interior of the reamer. Moreover, *Frieze* does not disclose a second portion that forms a portion of the exterior surface. Thus, *Frieze* does not anticipate independent claims 25 and 27.

Claim 26 depends from claim 25 and claim 28 depends from claim 27, and thus claims 26 and 28 are patentable for the reasons claims 25 and 27 are patentable, and may be patentable for additional reasons.

Amended claims 37 and 39 define a reamer having a cup-shaped hollow body, the hollow body having an exterior surface and an open end and a substantially closed end that define an interior volume spatially bounded by (1) a first portion of the exterior surface

having a plurality of raised edges and (2) at least one second portion of the exterior surface configured to maintain the fragments of bone or cartilage within the interior volume.

Moreover, claims 37 and 39 require that the plurality of raised edges comprise a lip configured to capture fragments of bone or cartilage or the combination thereof and direct those fragments through the openings into the interior of the reamer. Claim 39 also requires that the raised edges be confined to an area of the first portion in a band straddling a middle portion of the exterior surface of the cup-shaped hollow body.

As shown above, *Frieze* does not have a second portion that is configured to maintain bone fragments within an interior volume of the reamer. Instead, *Frieze* has open spaces distributed throughout the reamer that are not surfaces at all, let alone capable of maintaining bone fragments within an interior volume of the reamer. Thus, *Frieze* does not anticipate independent claims 37 and 39. Moreover, *Frieze* does not disclose a reamer having raised edges comprising a lip configured to capture fragments of bone or cartilage or the combination thereof and direct those fragments through the openings into the interior of the reamer and therefore does not anticipate claims 37 and 39 for this additional reason. In addition, as explained above, *Frieze* discloses a reamer having raised edges that are distributed throughout the entire surface of the reamer and that are not confined to a band straddling the middle portion, and thus does not anticipate claim 39 for this additional reason.

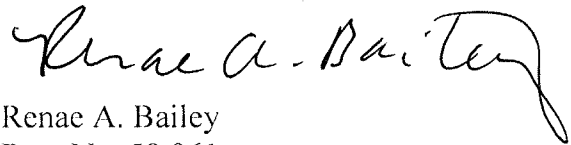
Claim 38 depends from claim 37 and claim 40 depends from claim 39. Thus, dependent claims 38 and 40 are patentable for the reasons independent claims 37 and 39 are patentable, and may be patentable for additional reasons.

Accordingly, the undersigned submits that claims 1, 3-5, 8-10, 12, and 25-40 are not anticipated by *Frieze* and are in a condition for allowance.

CONCLUSION

The undersigned respectfully submits that all pending claims are in a condition for allowance. Any fees due at this time maybe charged to Deposit Account Number 11-0855. If there are any matters that can be addressed by telephone, the Examiner is urged to contact the undersigned attorney at 404.532.6947.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Renae A. Bailey", with a stylized flourish at the end.

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